DOCUMENT RESUME

ED 287 093 CE 048 667

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TITLE Secondary Marketing Teacher Education 1986-1987. Final Report.
INSTITUTION North Texas State Univ., Denton. Div. of Occupational and Vocational Education.
SPONS AGENCY Texas Coll. and Univ. System, Austin. Coordinating Board.
PUB DATE 15 Jul 87
NOTE 104p.; Appendix A, which contains confidential student information, is not included.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Basic Skills; Behavioral Objectives; Disadvantaged; *Distributive Education; Educational Legislation; Fused Curriculum; Learning Activities; Learning Modules; Lesson Plans; *Marketing; Postsecondary Education; Secondary Education; *Statewide Planning; Student Evaluation; *Teacher Certification; *Teacher Education; *Vocational Evaluation
IDENTIFIERS Carl D Perkins Vocational Education Act 1984; *Texas

ABSTRACT

A project was conducted to provide marketing education teacher certification courses to Texas teachers seeking provisional certification in marketing education. Materials and courses were developed to provide instruction on meeting the needs of disadvantaged students, assessing the needs and aptitudes of special needs students, and integrating basic academic skills into marketing instruction. Other project activities included the provision of an orientation workshop for new marketing education teachers, on-site technical assistance to first-year teachers, and a preservice workshop for marketing education teachers. This document consists of a brief project overview and course description and appendixes which form the bulk of the document and which include the instructional materials used in the courses. Learning modules on the vocational assessment process and the role of basic skills instruction in the vocational education curriculum are provided. The learning modules include objectives, lesson plans, and transparency masters. Techniques for assessing regular and special needs students, the Carl D. Perkins Vocational Education Act and its impact on vocational assessment, the advantages of work samples, exploratory vocational experiences, and the instructor's role in vocational assessment are covered in the first module. The module on basic skills deals with the importance of integrating basic skills into vocational instruction, basic skills that students need prior to employment, and ways in which these skills can be integrated into vocational courses. (MN)

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SECONDARY MARKETING TEACHER EDUCATION
1986-1987

FINAL REPORT

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NORTH TEXAS STATE UNIVERSITY
DIVISION OF OCCUPATIONAL AND VOCATIONAL EDUCATION

JULY 15, 1987

U.S. DEPARTMENT OF EDUCATION
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A. Overview of the Project

The Secondary Marketing Education Teacher Education Teacher Education project was funded to provide the marketing education teacher certification courses to Texas' teachers seeking provisional certification in marketing education. The project was also directed to address the problems of secondary marketing education teachers in meeting the needs of disadvantaged students, to provide instruction on vocational assessment, and to provide techniques on how to integrate basic skills in math, communications/reading, and computer usage skills in the Marketing Education curriculum. Inservice needs were addressed through presentations at the beginning Marketing Education teachers workshop and the summer Marketing Teachers' Conference.

B. Goals and Objectives of the Project

1. To provide instruction in marketing teacher education certification courses on meeting the needs of disadvantaged students.

2. To provide instruction in marketing teacher education certification courses in assessing the needs, interests, and aptitudes of vocational students.

3. To provide techniques to integrate basic skills in math, science, communications, and computer usage skills in Marketing Teacher Education Curriculum.

4. To assist in conducting an orientation workshop for new Marketing Education teachers.

5. To provide on-site technical assistance to first year teachers.

6. To conduct one pre-service workshop for Marketing Education teachers.

C. Results and Accomplishments of Project

1. Marketing Education Certification Courses Offered: (See Appendix A for class lists)

SUMMER II 1986 Course Offerings

EDVT 5550 Coordination Techniques in Vocational Education taught by Dr. Richard James had an enrollment of nine students.

EDVT 5430 History and Principles of Vocational Education taught by Dr. William Watkins had an enrollment of fifteen students.

FALL SEMESTER 1986 Course Offerings

EDVT 4070 History and Principles of Vocational Education taught by Mr. Tom Loftin had an enrollment of eleven students.

EDVT 5900 Economic Trends in Distribution taught by Dr. Roger Ditzenberger had an enrollment of nine students.

SPRING SEMESTER 1987 Course Offerings

EDVT 5620 Post Secondary Adult and Vocational Education Programs taught by Dr. Roger Ditzenberger had an enrollment of ten students.

SUMMER I 1987 Course Offerings

EDVT 5430 History and Principles of Vocational Education taught by Linda Anderson had an enrollment of fifteen students.

EDVT 5630 Organization and Administration of Vocational Education of Vocational Education Programs taught by Linda Anderson had an enrollment of eleven.

2. Provided six hours of instruction on vocational assessment. These sessions were piloted in a Spring 1987 certification course and a Summer II 1987 certification course, and finally revised after the Summer II 1987 pilots. The materials were developed by Craig Colby as a component of the Vocational Special Needs Teacher Training Curriculum. The presentations in the certification courses were completed by Marti Barbieri, consultant for the McCarion Dial Corporation. (See Appendix B for the vocational assessment materials). These materials will be used in developing lesson plans for certification courses. Marti Barbieri also provided two one-hour sessions at the Marketing Education Summer Teacher's Conference on Vocational Assessment. Approximately two hundred marketing education teachers attended the vocational assessment sessions.

3. Reviewed the literature to obtain teaching materials and evaluate teaching strategies on integrating the basic generalizable skills of basic math skills, basic reading skills, basic writing skills, and communications skills into the marketing education curriculum. These materials were developed by Craig Colby as a component of the Vocational Special Needs Teacher Training Curriculum. The materials have been field-tested in vocational teacher education courses and will be further revised to be used in the marketing education certification course EDVT 5530 Vocational Education Curriculum Development during the 1987-88 academic year by Dr. Jerry Moorman. Marketing Teacher Educator at North Texas State University, Dr. Mickey Sarkees, Vocational Special Needs Teacher Educator in Marketing Education at the University of Georgia conducted two one-hour presentations on these materials to approximately two hundred secondary marketing education teachers at the Summer Conference in Austin, Texas. (See Appendix C for basic skills materials.)

4. Dr. Richard James conducted six hours of inservice training at the Orientation Workshop for Beginning Marketing Education Teachers in Texas held in Houston, Texas during August 1987. Dr. James' presentation was on developing an on-the-job training program for secondary marketing education students.

5. On-site technical assistance was provided to ten new marketing education teachers in Texas. The following marketing education teachers were provided with sales training materials and a complete training sponsor development program for a secondary marketing education program:
    1. Debbie Ahlers
    2. Felicia Brooks
    3. Patti Taylor
    4. Don Watson
    5. Don Thoms
    6. Kris Carlton
    7. Linda
    8. Debbie Johnston - Irving
    9. Sheila Caldwell

6. Two workshop sessions were provided at the 1986 Marketing Education Teacher Summer Conference in Dallas, Texas. Dr. Richard James provided six hours of in-service training on microcomputer applications for secondary marketing education teachers. Dr. Roger Ditzenberger conducted three one-hour presentations on teachers salesmanship.

D. Evaluations of project activities

1. Student evaluations for the marketing education certification courses are found on the following pages.

2. The evaluation of the curriculum materials developed for vocational assessment and integrating basic skills in vocational education were completed by third-party evaluators, Dr. Lynda West and Dr. Mickey Sarkees as a copmonent of the Vocational Special Needs Teacher Training Curriculum Project. The workshop presentations at the Marketing Education Teachers Summer Conference and the Orientation Workshop for Beginning Marketing Education Teachers were conducted by the Texas Education Agency Marketing Education personnel.

E. Conclusions and Recommendations

The first recommendation deals with the means of supporting marketing teacher education courses. The Texas Education Agency should not include reimbursement of certification courses for marketing education.

Each university should have faculty lines to cover the cost of offering marketing education courses. The money might better be spent for special projects or non-traditional activities of the marketing education teacher educator desired by the Texas Education Agency which the university might not fund.

The curriculum materials piloted in this project should be field-tested and revised again this year to improve their utilization for marketing education teacher certification courses.

APPENDIX A. Marketing Certification Class Lists

APPENDIX B. Vocational Assignment Materials

LEARNING ACTIVITY

THE VOCATIONAL ASSESSMENT PROCESS

Terminal Objective:

Upon completion of this module, the participant will be able to identify and describe the important elements in effectively serving on a multidisciplinary assessment team, for the purpose of assisting students with special needs in goal setting, programming, and making appropriate educational and employment placement decisions.

Enabling Objectives: Upon completion of this module, the participant will be able to:

1. Define the term "vocational assessment."
2. Identify at least three important benefits the vocational assessment process can have for special needs learners.
3. Explain the legislative mandate within the Carl D. Perkins Vocational Education Act of 1984 regarding the vocational assessment process for students with special needs.
4. Discuss the general and specific purposes behind the vocational assessment process for learners with special needs.
5. Identify the general and specific categories of special learners who, by law, must receive a vocational assessment.
6. Explain when the vocational assessment should take place.
7. Identify who shall conduct a comprehensive vocational assessment.
8. List the six major components of a vocational assessment.
9. Explain the purpose for Level I assessment.
10. Identify at least four information sources for Level I assessment.
11. Explain the purpose for Level II assessment.
12. Identify at least two commercially developed combination (interest and general aptitude) tests, aptitude tests, and interest inventories commonly used in Level II assessment.
13. Explain the purpose for Level III assessment.

14. Discuss the purpose and advantages in using a work sample for Level III assessments.

15. List the advantages and disadvantages of commercially developed and locally developed work samples.

16. Discuss those items which should be taken into consideration prior to purchasing commercially made work samples.

17. Discuss those items which should be taken into account prior to developing locally made work samples.

18. Discuss the purpose for exploratory vocational experiences used in Level III assessments.

19. Explain why the vocational assessment specialist should include frequent and direct monitoring of the student's progress as part of the vocational assessment process.

20. Discuss the purpose for developing a Learner's Profile.

21. List the major components of a Learner's Profile.

22. Discuss how information obtained from the vocational assessment processmay be utilized by a coordinated planning team for screening, placement, and program planning.

23. Explain the importance of utilizing assessment information in evaluating the effectiveness of a student's program.

24. Discuss the role of the vocational educator with regard to their involvement with vocational assessments.

Teaching Aids

1. Overhead projector

2. Filmstrip projector

Suggested
Lesson
Development: The Vocational Assessment Process

PRESENTATION STEPS	ACTIVITY
I. INTRODUCTION	
A. Help the participants <u>define</u> the term "vocational assessment."	
1. Ask the participants if they can think of ways in which to define the term "vocational assessment."	Write Definitions on Chalkboard
2. Ask participants for some examples of vocational assessment (i.e., what does it include).	List On Chalkboard
3. Present Transparency M-4: T1 "Vocational Assessment Defined"	Discuss Transparency M-4: T1 o What are the key points to the definition?

<u>Instructional Note</u>:

At this point, each participant should have a general idea of how to define the term "vocational assessment."

** Presentation of Enabling Objective #1 **

VOCATIONAL ASSESSMENT DEFINED

Vocational Assessment Is:

A comprehensive student-centered process conducted over a period of time involving a multi-disciplinary team approach, with the purpose of identifying individual characteristics, strengths and weaknesses, as well as education, training, and placement needs.

PRESENTATION STEPS	ACTIVITY
B. Discuss with the participants the purposes of vocational assessment for students with special needs.	
1. Ask the participants to cite reasons why a vocational assessment is an important process.	
2. Present Transparency M4: T2 "Vocational Assessment: A Special Need"	**Discuss Transparency M-2: T2** o Why would special needs learners have more difficulty formulating a positive self-concept? o How would the vocational assessment process help develop the self-concept?
3. Present Transparency M-4: T3 "Vocational Assessment: First Step and Vital Link"	**Discuss Transparency M-4: T3** o Why would the vocational assessment be considered "a first step and vital link" to <u>all</u> successful rehabilitation activities

VOCATIONAL ASSESSMENT: A SPECIAL NEED

Special needs learners desperately need objective information about their strengths and limitations because many times they have more difficulty than others in formulating a positive self image of themselves.

VOCATIONAL ASSESSMENT: FIRST STEP AND VITAL LINK

The importance of a comprehensive vocational assessment for learners with special needs should never be underestimated. Vocational assessment is the first step and vital link to all successful rehabilitation activities.

Paul W. Power

PRESENTATION STEPS	ACTIVITY
C. Discuss with participants the <u>important benefits</u> of the vocational assessment process for learners with special needs.	
1. Present Transparency M-4: T4 "Vocational Assessment: Important Benefits"	Discuss Transparency M-4: T4

<u>Instructional Note</u>:

At this point, each participant should have a general idea of how to identify the value and important benefits the vocational assessment process can have for special needs learners.

** Presentation of Enabling Objective #2 **

VOCATIONAL ASSESSMENT: IMPORTANT BENEFITS

Important benefits from the vocational assessment process for the student with special needs may include:

- **Improved and/or increased motivation**
- **Improved understanding of the relationship between educational experiences and future vocational opportunities**
- **Acquisition of skills for making wise educational and vocational choices**
- **Increased understanding of personal values, interests, skills, and deficits as they relate to the world of work**

PRESENTATION STEPS	ACTIVITY

II. CONTENT

A. The principle of vocational assessment is so vitally important for students with special needs that it's mandated by the Carl D. Perkins Vocational Education Act of 1984 (P.L. 98-524).

1. Present Transparency M-4: T5 "Carl D. Perkins Vocational Education Act of 1984"

Discuss Transparency M-4: T5

- o Which special needs populations are involved?
- o What is guaranteed by Public Law 94-485 with regard to vocational assessment?

Instructional Note:

At this point, each participant should be able to explain the legislative mandate within the Carl Perkins Vocational Education Act of 1984 regarding the vocational assessment process for students with special needs. In addition, each participant has been exposed in general terms to:

1. The special needs students which are guaranteed a vocational assessment.
2. What each special needs student should be receiving.

** Presentation of Enabling Objective #3**

CARL D. PERKINS VOCATIONAL EDUCATION ACT OF 1984

According to the Carl D. Perkins Vocational Education Act of 1984, each local education agency shall ensure that handicapped, educationally disadvantaged, economically disadvantaged, and limited English proficient students enrolled in vocational education programs receive an assessment of their interests, abilities, and special needs with respect to the successful completion of their program.

PRESENTATION STEPS	ACTIVITY
B. Discuss the overall and specific purposes behind a vocational assessment for students with special needs.	
1. Present Transparency M-4: T6 "Overall Purpose For The Vocational Assessment"	Discuss Transparency M-4: T6
2. Present Transparency M-4: T7 "The Vocational Assessment: Specific Purposes"	Discuss Transparency M-4: T7 o Why are each of these specific purposes important?

Instructional Note:

At this point, each participant should be able to discuss the general and specific purposes behind a vocational assessment.

Presentation of Enabling Objective #4

OVERALL PURPOSE FOR VOCATIONAL ASSESSMENT

The overall purpose for a vocational assessment is to collect and interpret information for students, parents, educators, counselors, and other support personnel to use in planning appropriate educational experiences which will enhance a student's success in vocational education programs.

It should be remembered, however, that there is no perfect, or even near perfect vocational assessment. Some educators tend to associate assessment with specific tests - and yet vocational assessment of special needs learners should be an ongoing process, with a combination of observation, experience, stimulation, and practice.

THE VOCATIONAL ASSESSMENT: SPECIFIC PURPOSES

Specifically, vocational assessment information and its interpretation should assist parents and educational personnel planning for students with special needs in the following ways:

- **Determine vocational potential (strengths and limitations)**
- **Develop realistic instructional goals and objectives**
- **Identify appropriate program placements that will assist students in meeting their goals and objectives**
- **Identify appropriate instructional methods and curriculum adaptations**
- **Provide relevant support services**

PRESENTATION STEPS	ACTIVITY
C. Review with the participants, the categories of special learners who shall <u>receive</u> a vocational assessment according to PL 94-524.	
1. Present Transparency M-4: T8 "Who Shall Receive A Vocational Assessment?"	**Review Transparency M-4: T8** o Emphasize that <u>all</u> of the special needs populations are being involved.
<u>Instructional Note</u>: The participant should now be able to identify those special learners who, by law, shall receive a vocational assessment. **** Presentation of Enabling Objective #5 ****	
D. Discuss with the participants <u>when</u> the vocational assessment process should take place.	
1. Present Transparency M-4: T9 "When To Assess"	**Discuss Transparency M-4: T9**
<u>Instructional Note</u>: The participant should be able to explain that a vocational assessment is an <u>ongoing process</u> and that there are required times when the assessment should take place. **** Presentation of Enabling Objective #6 ****	

WHO SHALL RECEIVE A VOCATIONAL ASSESSMENT?

According to the guidelines as set forth in the Carl D. Perkins Vocational Education Act of 1984, all:

- **Handicapped Students**
- **Academically Disadvantaged Students**
- **Economically Disadvantaged Students**
- **Limited English Proficient Students**

planning to participate in vocational education programs, shall have an assessment of their vocational interests, abilities, and special needs.

WHEN TO ASSESS?

- A student entering a prevocational program during the seventh or eighth grade should have a vocational assessment
- A student planning to enter a vocational program in high school should have a basic vocational assessment during the year prior to entry into a vocational program
- A student participating in a prevocational program at the seventh and eighth grade levels who does not enroll in vocational programs until the tenth or eleventh grade should have additional vocational assessment to update records prior to entry into a vocational program
- Further assessment occurs during participation in vocational programs as vocational instructors observe student behaviors changing

The Education Agency (1985)

PRESENTATION STEPS	ACTIVITY
E. Discuss with the participants who shall <u>conduct</u> a comprehensive vocational assessment.	
1. Present Transparency M-4: T10 "Who Shall Conduct A Vocational Assessment?"	Discuss Transparency M-4: T10 o Who should be involved in this cooperative effort? (List on Chalkboard) o Discuss why should the vocational assessment process should be a cooperative effort?
2. Present Transparency M-4: T11 "Vocational Assessment: A Cooperative Effort"	Discuss Transparency M-4: T11 o Why should so many professionals and specialists from so many varied backgrounds be involved? o Why should parents/guardians be involved? o What contribution/s could the special needs learner make to the vocational assessment process?

<u>Instructional Note</u>: At this point, each participant should be able to identify many of the individuals involved in the cooperative vocational assessment process.

** Presentation of Enabling Objective #7 **

WHO SHALL CONDUCT A VOCATIONAL ASSESSMENT?

A comprehensive vocational assessment for students with special needs should be a cooperative effort among a variety of professionals and not limited strictly to vocational evaluators, psychologists, and diagnosticians.

VOCATIONAL ASSESSMENT: A COOPERATIVE EFFORT

The following is an example of professionals, specialists, and other individuals who can be a part of the cooperative assessment process:

- **Administrators (Special Education/Vocational Education/ General Education)**
- **Vocational Teacher/s**
- **Vocational Special Needs Personnel**
- **Special Education Teacher/s**
- **Vocational/Guidance Counselor**
- **Vocational Evaluator/s**
- **Occupational Therapist**
- **Vocational Rehabilitation Personnel**
- **Clinicians as appropriate**
- **Psychologist**
- **Medical Personnel**
- **Social Workers**
- **Parents/Guardians**
- **Special Needs Learner**

PRESENTATION STEPS	ACTIVITY
F. In order to accomplish long-range planning and appropriate vocational placement and instruction, a student's abilities, liabilities, interests, and aptitudes must be determined.	
1. Ask the participants to name the major components which they think should be incorporated in a comprehensive vocational assessment.	List Responses On Chalkboard
2. Present Transparencies M-4: T12 & T13 "Major Components Of Vocational Assessment (A & B)	Discuss Transparencies M-4: T12 & T3

Instructional Note:

The participant should now be able to list the six major components of a comprehensive vocational assessment.

** Presentation of Enabling Objective #8 **

MAJOR COMPONENTS OF A VOCATIONAL ASSESSMENT (A)

Component	Explanation
Basic Skills	**Reading Comprehension, Spelling, Grammar, Functional Math, Measurement, and Money Handling**
Sensory and Motor Skills	**Dexterity, Coordination, Strength, Mobility, Range of Motion, Visual Acuity, Auditory Acuity**
Learning Preference	**How the Student Learns Best** (i.e. visually, auditorily, by doing)

MAJOR COMPONENTS OF A VOCATIONAL ASSESSMENT (B)

Component	Explanation
Vocational Skills and Aptitudes	Use of Tools, Materials, Equipment and General Potential for Work
Career Awareness and Interest	Knowledge of Jobs, Expressed Career Goal, Observed Interests, Employment History, etc.
Personal Behavior	Worker Characteristics and Habits, Communication Skills, Job Keeping Skills, Social and Interpersonal Relations

PRESENTATION STEPS	ACTIVITY
G. According to the recommendations set forth by the Texas Education Agency, three levels of vocational assessment (Levels I, II, and III) provide a logical sequence for the collection of data and administration of a vocational assessment.	
1. Present Transparency M-4: T14 "Overview of Vocational Assessment Levels"	Discuss Transparency M-4: T14 o Why are vocational assessment levels necessary?
2. Discuss Level I assessment: a. Why is it important to collect pre-existing information about a student? b. Where would you go to collect Level I assessment information for evaluation?	
3. Present Transparency M-4: T15 "Information Sources For Level I Assessment"	Discuss Transparency M-4: T15 o Why would Level I assessment information be important?

Instructional Note:

Each participant should now be able to explain the purpose for Level I assessment and identify at least four information sources.

** Presentation of Enabling Objectives #9 & #10 **

OVERVIEW OF VOCATIONAL ASSESSMENT LEVELS

Assessment Levels	Explanation
Level I	Involves summarizing pre-existing information related to a student's abilities, level of functioning, and any other pertinent facts.
Level II	Involves the collection of information utilizing assessment instruments involving a student's vocational interest, ability, and aptitude, vocational awareness, and work-related behaviors.
Level III	Conducted when school personnel cannot identify long-range goals or place a student in a vocational program based on the information gathered from Assessment Levels I and II.

ASSESSMENT LEVEL I: INFORMATION SOURCES

Rather than additional testing, Assessment Level I requires the collection of information for interpretation from five sources:

1. **Cumulative records, transcripts, and/or other forms of permanent records.**
2. **Special education data found in the student's eligibility folder.**
3. **Informal interview with the student by a teacher or counselor who has a good rapport with the student.**
4. **Informal conference or interview with the student's parents.**
5. **Interview with former teachers.**

PRESENTATION STEPS	ACTIVITY

H. Level II assessment involves the collection of information related to the student's vocational interests and aptitudes. This assessment level involves the use of assessment instruments.

1. Present Transparency M-4: T16 "Level II Assessment"

Discuss Transparency M-4: T16

- **Why is it important to collect this additional assessment information?**
- **How could this information be used?**

2. Present Transparency M-4: T17 "Level II: Commonly Used Assessment Instruments"

Discuss Transparency M-4: T17

3. Pass out handout M-4: HO1 "Additional Level II Vocational Assessment Tests"

Suggested Activity: It is suggested that samples of Level II testing instruments be brought to class for demonstration and use by each participant. Ideally, the participants should experience each type of test (i.e. combination interest and general aptitude, aptitude, and interest test).

Instructional Note: At this point, each participant should be able to:

(a). Explain the purpose of Level II assessment.
(b). Identify commonly used assessment instruments used in collecting Level II assessment data.

** Presentation of Enabling Objectives #11 & #12 **

ASSESSMENT LEVEL II

Assessment Level II involves the collection of information related to the student's vocational interests and aptitudes. The purpose of this assessment level is to collect and interpret additional information addressing the student's vocational interest, ability and aptitude, vocational awareness, and work-related behaviors.

LEVEL II:
COMMONLY USED ASSESSMENT INSTRUMENTS

Type of Test	Name of Test
Interest and General Aptitude (Combination)	• APTICOM • Valpar Micro-Computer Evaluation and Assignment (MESA) • Occupational Aptitude Survey and Interest Schedule (OASIS)
Aptitude	• McCarron-Dial Evaluation System • Skills Assessment Module (SAM) • Career Ability Placement Survey (CAPS)
Interest	• Becker Reading Free Vocational Interest Inventory • California Occupational Preference System (COPS) • Career Assessment Survey Exploration (CASE) • Pictorial Inventory of Careers (PIC)

PRESENTATION STEPS	ACTIVITY
I. Discuss Level III Assessment.	
1. Present Transparency M-4: T18 "Level III Assessment"	Discuss Transparency M-4: T18 o Ask the participants for some personal examples where a Level III assessment was needed.
Instructional Note: ** Presentation of Enabling Objective #13 **	
2. Present Transparency M-4: T19 "Level III: Work Samples"	Discuss Transparency M-4: T19 o What would be the advantages in utilizing work samples?
3. (a). Ask participants for <u>advantages</u> in using work samples.	List on Chalkboard
(b). Ask participants for <u>disadvantages</u> in using work samples.	List on Chalkboard
4. Present Transparency M-4: T20 "Advantages In Using Work Samples"	Discuss Transparency M-4: T20
Instructional Note: ** Presentation of Enabling Objective #14 **	

LEVEL III ASSESSMENT

A Level III Assessment is conducted when school personnel cannot identify long-range goals or place a student in a vocational program based on the information gathered from Level I and Level II evaluations. This additional assessment may include observation of a student's use of work samples, and/ or in vocational classroom exploratory experiences.

LEVEL III:
WORK SAMPLES

Work Samples are a simulation of an occupational task, business operation, or a component of an occupational area. Work samples incorporate the tools, equipment, and standards associated with the job.

Work Samples can be purchased commercially or locally developed by vocational personnel.

ADVANTAGES IN USING WORK SAMPLES

- **Provides realistic and practical hands-on experiences with some aspects of an occupation for the student**

- **Provides the evaluator with excellent observation information concerning the work habits, manipulative skills, physical abilities, interpersonal skills, and work capacity of the specific learner**

Sarkees & Scott

PRESENTATION STEPS	ACTIVITY
5. (a). Ask participants for advantages and disadvantages in using commercially made work samples.	List on Chalkboard
(b). Ask participants for advantages and disadvantages in using locally made work samples.	List on Chalkboard
6. Present Transparency M-4: T21 "Work Samples: Commercial v. Locally Developed"	Discuss Transparency M-4: T21

Instructional Note:

** Presentation of Enabling Objective #15 **

7. Ask the participants what they think should be taken into consideration prior to purchasing a comercially made work sample?

   (a). Present Transparency M-4: T22 "Key Questions To Ask Prior To Purchasing A Commercially Made Work Sample"

Instructional Note:

** Presentation of Enabling Objective #16 **

WORK SAMPLES: COMMERCIAL vs. LOCALLY DEVELOPED

Type	Advantages	Disadvantages
Commercial	• Tend to be very motivating because they are more like a real job task	• Expensive • Time Consuming • May be Too Simplistic • Norms May Not Relate to the Population Being Evaluated
Locally Made	• Less expensive • More closely associated with the demands of the local labor market	• Amount of Time Needed to Develop • Lack of Standardized Administration and Scoring Techniques • Validity and Reliability Factors are Questionable

KEY QUESTIONS TO ASK PRIOR TO PURCHASING A COMMERCIALLY MADE WORK SAMPLE

Does the System Take Into Account:

- **Expectancy to fail?**
- **Academic limitations?**
- **Verbal limitations?**
- **Experience limitations?**

Does the System Allow For:

- **More than one trial on tasks?**
- **Repeat instruction and check for comprehension?**
- **Appropriate conditions for testing?**

Is the System an Accurate Assessment of the Content Presented?

Does the System Allow for Appropriate Conditions for Testing?
(i.e. does the system offer pleasant surroundings, orderly administration, and considerations for fatigue of individuals?)

Adapted from: Brolin, D. (1976). Vocational Preparation for Retarded Citizens. Columbus, Ohio: Charles E. Merrill Publishing Co.

PRESENTATION STEPS	ACTIVITY
8. Ask the participants what they think should be taken into consideration prior to developing locally made work samples? A. Pass out handout M-4: H02	Pass Out & Discuss Handout M-4: H02
Instructional Note: ** Presentation of Enabling Objective #17 **	
9. Another method used in the Level III assessment process is observation of the student in a vocational classroom or during an on-campus trial job experience. A. What would be the purpose and advantages of this method of assessment? B. Ask the participants to identify various settings which may be used in designing a student's exploratory experience?	
10. Present Transparency M-4: T23 "Exploratory Vocational Experiences"	Discuss Transparency M-4: T23
Instructional Note: ** Presentation of Enabling Objective #18 **	

EXPLORATORY VOCATIONAL EXPERIENCES

The following are four settings which may be used in designing a student's exploratory experience:

- **Special education/vocational readiness training. Designed by vocational educators and special education personnel incorporating a simulated exploratory setting for assessments as an integral part of the curriculum**
- **On-campus trial job experiences in the school setting**
- **Vocational education classes at the Junior High School level, including exploratory industrial arts and occupational investigation**
- **Vocational education facilities at the High School level may be used with the approval from vocational personnel**

PRESENTATION STEPS	ACTIVITY
J. Ask the participants why vocational assessment specialists should include frequent and direct monitoring of the student's progress as part of the vocational assessment process. 1. Use information on pp. 15-16 from the Overview.	Discuss
Instructional Note: ** Presentation of Enabling Objective #19 **	
K. Discuss the purpose of a learner's profile.	
1. Present Transparency M-4: T24 "The Learner's Profile" (a). Utilize information on p. 16 from the Overview.	Discuss Transparency M-4: T24 o Why is it important to develop a Learner's Profile?
2. Pass out handout M-4: H03 "Learner Profiles (#1 - #4)	Discuss Handout M-4: H03
Instructional Note: ** Presentation of Enabling Objective #20-#21 **	

THE LEARNER'S PROFILE

1. Consists of relevant background information obtained during Assessment Levels I and II.

2. Data is organized into single usable documents.

3. May be used when planning support services.

4. Should contain information from the following areas:

    A. Educational/academic/psychological
    B. Physical/medical
    C. Social/interpersonal relations
    D. Prevocational/vocational interests, attitudes, and behaviors

Sarkees & Scott

PRESENTATION STEPS	ACTIVITY
L. Discuss how information obtained from the vocational assessment process may be utilized by a coordinated planning team.	
1. Present Transparency M-4: T25 "Utilization Of Assessment Data"	Discuss Transparency M-4: T25
2. Utilize information on pp. 17-19 from the Overview.	

Instructional Note:

At this point, the participant should be able to discuss how information obtained from the vocational assessment process may be utilized by a coordinated planning team for screening, placement, and program planning.

** Presentation of Enabling Objective #22 **

a. How can assessment information be utilized to determine the effectiveness of a student's program?	Discuss
b. Why is it important to determine the effectiveness of a student's program?	Discuss

Instructional Note:

** Presentation of Enabling Objective #23 **

UTILIZATION OF ASSESSMENT DATA

Purpose	Function
Screening	● Is Vocational Education an Appropriate Curriculum? ● Importance of Parental Input
Placement	● Which Vocational Curriculum? ● Educators Shouldn't be Too Quick to Label a Student ● Job Availability?
Program Planning	● Determining Annual Goals and Short-Term Objectives ● Prevocational and/or Life Skills Training ● Need for Supportive Services/Modifications
Program Monitoring	● How Well Does the Student's Learning Style Match the Instructor's Teaching Style? ● Appropriateness of the Structure of the Class?
Program Evaluation	● Is the Program Effective in Meeting the Needs of the Student? ● Are the Support Services Adequate? ● Is This the Most Appropriate Program for the Student? ● Are Changes Necessary?

PRESENTATION STEPS	ACTIVITY
M. Review the role of the vocational educator with regard to their involvement in the vocational assessment process.	
1. Ask the participants what role should the vocational educator play in the vocational assessment process?	Discuss
2. Present Transparency M-4: T26 "Vocational Assessment: The Vocational Educator's Role"	Discuss Transparency M-4: T26

Instructional Note:

At this point, each participant should be able to discuss the role vocational educators should play with regard to their involvement in the vocational assessment process.

** Presentation of Enabling Objective #24 **

VOCATIONAL ASSESSMENT: THE VOCATIONAL EDUCATOR'S ROLE

The vocational educator, as part of the multidisciplinary team, can play a key role in the cooperative assessment process by determining the entry level skills and aptitude necessary for the successful completion of a vocational program. The vocational educator can then assist in matching a student's skills with the various vocational programs. In addition, a vocational educator can be very valuable in:

- **Developing realistic vocational work samples**
- **Assisting in the planning, implementation, and evaluation of a vocational exploratory experience**
- **Helping with the modification of a vocational curriculum based on the assessment information**

PRESENTATION STEPS	ACTIVITY

Suggested Activities:

1. Invite to class individuals from your school district who are in charge of the vocational assessment of students with special needs (i.e., special education personnel guidance counselors, special education staff, and vocational rehabilitation counselors). These individuals could help embellish the presentation of this module by:

   A. Discussing the importance and implications of the vocational assessment process.

   B. Discuss how students have been helped by the cooperative assessment process.

   C. Discuss the various assessment instruments which are used by the school district.

   D. Answer any questions the participants may have.

2. View the slide/tape series entitled, Assessment Modules developed by Stout Vocational Rehabitation Institute, University of Wisconsin-Stout. This slide/tape series describes well-known vocational assessment systems.

III. SUMMARY

A. Present Transparencies M-4: T27-T30 "Module 4 Review" — Review Module 4

B. Pass out handout M-4: H04 to each participant for their review of Module 4.

MODULE FOUR REVIEW
THE VOCATIONAL ASSESSMENT PROCESS

Now that you have completed Module Four, can you:

- **Define the term "vocational assessment?"**
- **Identify important benefits of the vocational assessment process?**
- **Explain the legislative mandate within the Perkins Vocational Education Act which addresses vocational assessment?**
- **State the general purpose of the vocational assessment process?**
- **Identify four categories of special learners who must receive a vocational assessment?**
- **Explain when the vocational assessment should take place?**
- **Identify who shall conduct a comprehensive vocational assessment?**
- **List the six major components of a vocational assessment?**

MODULE FOUR REVIEW (B)

Now that you have completed Module Four, can you:

- **Explain the purpose for Level I assessment?**
- **Identify information sources utilized in Level I assessment?**
- **Explain the purpose for Level II assessment?**
- **Identify commercially developed combination tests, aptitude tests, and interest inventories commonly used in Level II assessment?**
- **Explain the purpose for Level III assessment?**
- **Discuss the purpose and advantages in utilizing work samples?**
- **List the advantages and disadvantages in using commercially developed and locally developed work samples?**

MODULE FOUR REVIEW (C)

Now that you have completed Module Four, can you:

- **Discuss what should be taken into consideration prior to purchasing a commercially developed work sample?**
- **Discuss those items that should be taken into account prior to developing a locally made work sample?**
- **Discuss the purpose for exploratory vocational experiences?**
- **Explain why frequent and direct monitoring of a student's progress should be made part of the vocational assessment?**
- **Discuss the purpose for developing a learner's profile?**
- **List the major components of the learner's profile?**

MODULE FOUR REVIEW (D)

Now that you have completed Module Four, can you:

- **Explain how information obtained from the vocational assessment process can be utilized by a coordinated planning team for screening, placement, and program planning?**
- **Explain the importance of utilizing assessment information in evaluating the effectiveness of a student's program?**
- **Discuss the role of the vocational educator with regard to their involvement with vocational assessments?**

APPENDIX C. Basic Skills
Materials

MODULE EIGHT

GENERALIZABLE SKILLS INSTRUCTION

INTRODUCTION

The lack of basic job-related academic and interpersonal skills are two fundamental reasons why learners with special needs will: (a) drop out of school, (b) become underemployed or unemployed after leaving school or (c) be unable to maintain employment. If the primary objective of vocational education is to assist students in developing employable skills and providing for their successful transition from school to work, then the development of basic or generalizable skills literally become vocational skills which should not be underestimated or overlooked by the vocational educator.

The primary purpose, therefore, of this module is to assist the participant in understanding:

1. The importance of integrating basic skills instruction into vocational education curricula.
2. The basic or generalizable skills a student must have prior to employment.
3. The ways in which the vocational educator can integrate basic skills instruction into vocational education curricula.

LEARNING ACTIVITY

GENERALIZABLE SKILLS INSTRUCTION

Terminal Objective

Upon completion of this module, the participant will be able to explain how to effectively integrate generalizable skills instruction into the vocational curricula.

Enabling Objectives

Upon completion of this module, the participant will be able to:

1. Identify the consequences for a student who lacks basic education skills.
2. Explain some of the significant findings of The National Commission on Excellence in Education (1983) and The National Commission on Secondary Vocational Education (1984).
3. Define the term "generalizable skills."
4. Discuss the advantages of integrating generalizable skills instruction with vocational education.
5. Identify four generalizable skill areas.
6. Discuss instructional strategies for teaching basic mathematics skills.
7. Discuss instructional strategies for teaching basic reading skills.
8. Discuss instructional strategies for teaching basic writing skills.
9. Discuss instructional strategies for teaching oral communication (speaking and listening) skills.
10. Discuss instructional strategies for teaching interpersonal relations skills.
11. Discuss instructional strategies for teaching reasoning skills.
12. Explain how vocational educators can evaluate their program for the adaptation and utilization of generalizable skills instruction.

Teaching Aids

1. Overhead projector

Suggested
Lesson
Development: Generalizable Skills Instruction

PRESENTATION STEPS	ACTIVITY
I. INTRODUCTION	
A. Present Transparency M-8: T1 "Consequences Of Lacking Basic Educational Skills"	
B. Present Transparency M-8: T2 "Purpose Of This Module"	**Discuss Transparency M-8: T1** o Can you think of other consequences of not having a strong background in basic skills?
** Presentation of Enabling Objective #1 **	
II. CONTENT	
A. Discuss the findings of The National Commission on Excellence in Education and The National Commission on Secondary Vocational Education.	
1. Present Transparency M-8: T3 "National Commission Studies"	
2. Highlight some of the more significant findings.	
** Presentation of Enabling Objective #2 **	

CONSEQENCES OF LACKING BASIC EDUCATIONAL SKILLS

The lack of basic job-related academic and interpersonal relations skills are primary reasons why learners with special needs will:

1. **Drop out of school**
2. **Become underemployed or unemployed**
3. **Will be unable to maintain employment**

PURPOSE OF THIS MODULE

The primary purpose of this module is to assist the participant in understanding:

1. **The <u>importance</u> of integrating basic skills instruction into the vocational education curricula.**

2. **The basic or generalizable skills a student <u>must have</u> prior to employment.**

3. **The ways in which the vocational educator can integrate basic skills instruction into the vocational education curricula.**

NATIONAL COMMISSION STUDIES

The following are two National Commission studies which helped focus public attention on excellence in education and the importance of students acquiring basic or generalizable skills for employment:

- **The National Commission on Excellence in Education (1983) A Nation at Risk: The Imperative for Educational Reform**
- **The National Commission on Secondary Vocational Education (1984) The Unfinished Agenda: The Role of Vocational Education in the High School**

PRESENTATION STEPS	ACTIVITY
B. Discuss the term "basic or generalizable skills?"	
1. Discussion Question: Ask the participants to define the term "basic or generalizable skills."	List Responses On Chalkboard
2. Present Transparency M-8: T4 "Basic or Generalizable Skills"	Discuss Transparency M-8: T4
** Presentation of Enabling Objective #3 **	
C. Discuss the importance of vocational education in helping students acquire and reinforce basic or generalizable skills.	
1. Discussion Question: Ask the participants why the vocational education laboratory would be an excellent environment for students to learn or reinforce generalizable skills.	List Reasons On Chalkboard
2. Present Transparency M-8: T5 "Generalizable Skills: The Importance Of Vocational Education"	Discuss Transparency M-8:T5
** Presentation of Enabling Objective #4 **	

DEFINITION OF THE TERM "GENERALIZABLE SKILL"

A generalizable skill is a skill which is basic, necessary and transferable (or common) within and/or across vocational programs. Basic skills are commonly believed to be necessary for success in vocational programs and employment.

James P. Greenan

GENERALIZABLE SKILLS: THE IMPORTANCE OF VOCATIONAL EDUCATION

The following are reasons why vocational education programs provide and excellent environment and opportunity for a learner to acquire or reinforce basic or generalizable skills:

- **Provides enjoyable "real world" learning experiences**
- **Taps the natural interests of the student**
- **Provides individualized instruction with immediate feedback**
- **Group projects can give students an opportunity to improve their interpersonal relations and basic work skills**
- **By applying basic education skills, students develop competence and confidence**

PRESENTATION STEPS	ACTIVITY
D. Introduce Greenan's four generalizable skill areas.	
1. Discussion Question: Ask the participants to identify four important basic or generalizable areas.	List Responses On Chalkboard
2. Present Transparency M-8: T6 "Greenan's Four Generalizable Skill Areas"	
** Presentation of Enabling Objective #5 **	
E. Discuss basic or generalizable mathematics skills.	
1. Present Transparency M-8: T7 "Basic Mathematics Skills: Important Points"	Discuss Transparency M-8: T7
2. <u>Discussion Question</u>: Ask participants to give examples of basic math skills needed in their vocational program.	List Responses On Chalkboard
3. Present Transparency M-8: T8 "Basic Mathematics Skills"	Discuss Transparency M-8: T8
a. Utilize information on pages 2-3 of the Overview for your discussion of specific basic math skills for each mathematical component.	o Compare participants' responses

GREENAN'S FOUR GENERALIZABLE SKILL AREAS

The following are four generalizable skill areas that Greenan has identified which are basic and necessary for a student's success in vocational education programs and gainful employment:

- **Mathematics skills**
- **Communications skills**
- **Interpersonal relations skills**
- **Reasoning skills**

BASIC MATHEMATICS SKILLS: IMPORTANT POINTS

- If a student lacks the basic math skills required for entry into their chosen occupation, it becomes the responsibility of mathematics and vocational educators to work together and provide structured supplemental instruction for the student

- It is important for the vocational educator to determine the kinds of math used by workers in occupational fields. In this way, the student will be learning the appropriate mathematical skills he or she will need for thier chosen vocation

BASIC MATHEMATICS SKILLS

The following are basic mathematics skills which can be generalized to many occupational areas:

- **Whole Numbers**
- **Fractions**
- **Decimals**
- **Percent**
- **Mixed Operations**
- **Measurement and Calculation**
- **Estimation**

PRESENTATION STEPS	ACTIVITY
F. Discuss instructional methods which can be used to integrate basic math skills instruction with the regular vocational education curriculum.	
1. Pass out Handouts M-8: HO1, HO2 a. "Basic Or Generalizable Math Skills Instruction" b. "Strategies For Teaching Basic Math Skills To Disadvantaged Students"	Discuss Handouts
** Presentation of Enabling Objective #6 **	
G. Discuss basic communication skills.	
1. Discussion Question: Ask participants to give examples of basic communication skills needed in a vocational program.	List Responses On Chalkboard
2. Present Transparency M-8: T9 "Communication Skills: Overview"	
3. Present Transparency M-8: T10 "Communication Skill (A): Words And Meanings" a. Review the associated generalizable skill elements for Words and Meanings. b. Resource: See p. 6 in the Overview.	Discuss Transparency M-8: T10

BASIC OR GENERALIZABLE MATH SKILLS INSTRUCTION

The following is a list of recommended remedial techniques or strategies which vocational educators and support personnel can utilize in helping students develop basic math skills necessary for gainful employment (King-Fitch, 1985; Otazo-Stern, 1980; Sarkees & Scott, 1985):

1. Determine the student's present level of skill in math by:

   A. Testing the student with applicable formalized tests (involve support of a math specialist).

   B. Devising informal situations to assess a student's ability to perform related math (i.e., individual shop projects).

   C. Referring to student records.

   D. Talking to the student's past teachers and/or support teachers.

2. Remember, the product is the most important aspect of your math objectives for students with special needs, not the process.

3. After determining the student's present math skills, build up the student's confidence by giving the learner applicable math problems that you know he or she can handle.

4. Do not waste time teaching math concepts which are not directly related to what the student is being asked to do.

5. Give short timed quizes (two or three minutes at the beginning of class) in which the student grades his/her work. Give the same quiz four days in a row or give the same problem and only change the numbers. Grade on the last day.

6. Try to make math enjoyable for the student by relating math concepts to the student's interest, home-life, and career goals.

7. Use visual means (charts, graphs, diagrams, blueprints) and tactile means (physical objects in which the student can measure or manipulate) when developing problems and concepts. For example:

   A. Adding coins, nails, or the inch marking on a ruler.
   B. Subtracting money, pipe lengths.
   C. Multiplying ingredients, tax, or stock.
   D. Dividing a board length, a pie, or a template into equal parts.
   E. Measuring wire, floor space, or paper.
   F. Folding paper or fabric into equal parts or geometric shapes.

8. Relate mathematical ideas to concepts the student already knows (e.g., comparing 15mm to 16mm film).

9. With regard to homework assignments, if the student is unable to complete the entire assignment, decrease the number of problems the student is expected to complete.

10. Develop worksheets on mathematical shortcuts such as a worksheet depicting number values (e.g., tens, ones) and multiplication charts.

11. If remediation efforts fail, bypass specific calculation problem areas by using calculators, tables, pocket charts, etc.

12. Rather than having the student keep track of numbers in their head for several measures, teach him/her to use a calculator.

13. Present your materials in a clear, organized, step-by-step way.

14. If students reverse numbers or mislay them during operations, have them use graph paper or work the operation in a tic-tac-toe configuration.

15. Put mathematical formulas into understandable common terms.

16. Put fractions into decimals when necessary.

17. Have the student say the problem out loud and verbally indicate the steps.

Important Note:

It is incumbent upon the vocational and mathematics educators to prepare students with basic math skills needed for gainful employment. In order to accomplish this goal, the vocational and mathematics educator must work cooperatively in identifying basic mathematics skills used in the various vocations and then adjust their curricula and instruction to meet the student's individual needs and goals.

STRATEGIES FOR TEACHING BASIC MATH SKILLS TO DISADVANTAGED STUDENTS

Some basic math concepts that provide a framework for more complex work include addition, subtraction, multiplication, division facts, and measuring.

Basic Addition, Subtraction, Multiplication, and Division Facts

Learning facts. Given a set of flashcards, the student will be able to give answers to basic facts. A time limit should be imposed. Students should keep track of their progress on a chart and be given verbal rewards for each small success.

Story problems. Create simple story problems to emphasize the basic facts and provide practice. For example, "If I need 16 board feet for project A and 12 board feet for project B, how much should I buy?" Use numbers that are essential to the subject matter in many forms, both verbal and written, in discussion, charts, signs, etc.

Measuring

Linear. Give students experience in measuring with rulers (standard and metric). They can measuredesks, chairs, pictures, books, walls, halways, or school grounds. Giving them a fill-in-the-blank worksheet provides structure and consistency to record-keeping. This is also an opportunity for students to work in pairs or small groups to help each other.

Volume. Practice with measuring wet and dry ingredients gives visual reinforcement of the size of one cup, one gallon, or one liter whether making a cake or concrete.

Temperature. Keeping track of daily indoor and outdoor temperature, body temperature, and oven temperature gives students a firm perspective on 'hot' or 'cold.' This is also a perfect opportunity for graphs and tables as a way of recording information.

Money. Problem-solving could involve the value of items in your particular subject area, such as materials for welding, sewing, or masonry. The opportunity to handle real money (nickels, dimes, quarters) helps students conceptualize the value of written numbers. This could also include the potential earning power of a skill. For example, "If I make $5 per hour, how much can I make if the job takes four hours?"

From: Kisner, M. (1985). Curriculum information network/disadvantaged. University Park, PA: The Pennsylvania State University.

COMMUNICATION SKILLS: OVERVIEW

Communication skills consists of the following basic components:

1. **Words and Meanings**
2. **Reading**
3. **Writing**
4. **Speaking**
5. **Listening**

COMMUNICATION SKILLS (A)

Words and Meanings

PRESENTATION STEPS	ACTIVITY
4. Present Transparency M-8: T11 "Communication Skill (B): Reading" a. Review the associated generalizable skill elements for Reading. b. Resource: See p. 6 in the Overview.	Discuss Transparency M-8: T11
5. Discuss instructional methods which can be utilized to assist learners who have poor reading skills. a. Pass out Handouts M-8: H03: "Remedial Reading Techniques" H04: "Fog Reading Index" H05: "Fry Readability Formula" H06: "Flesch Readability Formula" H07: "Cloze Procedure For Reading Comprehension"	Discuss Handouts o Show examples of how each formula is used. o Explain the limitations of each technique.
** Presentation of Enabling Objective #7 **	
6. Present Transparency M-8: T12 "Communication Skill (C): Writing" a. Review the associated generalizable skill elements for writing. b. Resource: See p. 6 and p. 9 in Overview.	Discuss Transparency M-8: T12

COMMUNICATION SKILLS (B)

Reading

REMEDIAL READING TECHNIQUES

The following is a list of remedial techniques vocational educators and support personnel can utilize in an effort to assist learners who have poor reading skills.

- Determine the readability level of material used in your class and reading level of your student/s (readability level of material can be determined by using the FOG Reading Index or Flesch Readability Formula; the student's reading level can be determined by using the Cloze Procedure).

  Note: See the following handouts for these formulas:

  M-8: H04: Fog Reading Index
  M-8: H05: Fry Readability Formula
  M-8: H06: Flesch Readability Formula
  M-8: H07: Cloze Procedure For Reading Comprehension

- Ensure that the reading material used in your classroom is compatible with the student's interest and ability level.

- Use several books or materials at various levels of reading difficulty that cover the same content.

- Rewrite important passages or selections to lower reading levels by simplifying vocabulary and shortening sentences (do not delete necessary technical terms.

- Tape important information from text on cassettes.

- Introduce and reinforce background concepts needed to understand the material in the reading.

- Cover all unfamiliar technical terms and words that may present difficulty in the reading materials.

- Review previously introduced terminology frequently used in the vocational program and assist learners in analyzing the meaning.

- Develop questions for learners before a silent or oral reading assignment and follow up the activity by discussing the questions.

- Make certain that printed pages have enough blank space so the learner will not be confused when reading, especially when there are pictures or diagrams involved.

- Vocabulary words should be in BOLD PRINT and defined on the same page they are used or at the end of the chapter.

- A glossary should provide a guide to pronunciation of terms in reading materials.
- Important subject headings should be presented in BOLD PRINT.
- Double-column pages provide for easier eye movement when reading content.
- Underline pertinent information and specific directions.
- Use a highlighting pen to identify main ideas, important lists, technical terms, and important facts.
- Provide extra help for students with reading problems.
- Once students read and comprehend content, utilize related activities and hands-on experiences to help complete the learning process.
- Modify test questions to make them easier to comprehend.

From: Sarkees, M. D. & Scott, J. L. (1985). Vocational special needs (2nd ed.). Alsip, Illinois: American Technical Publisher, Inc.

READABILITY FORMULAS

A readability formula is used to help determine the reading level of instructional material. There are several formulas which can be used for this purpose: (a) the Fog Reading Index; (b) the Fry Readability Formula; and (c) the Flesch Readability Formula. The following is a presentation of how each formula is used:

FOG READING INDEX

Several steps are required when using the FOG Index to determine the reading difficulty of instructional materials. The results of these steps will be a reading level comparable to a grade level. Calculations for each of these steps may be recorded in the spaces at the right.

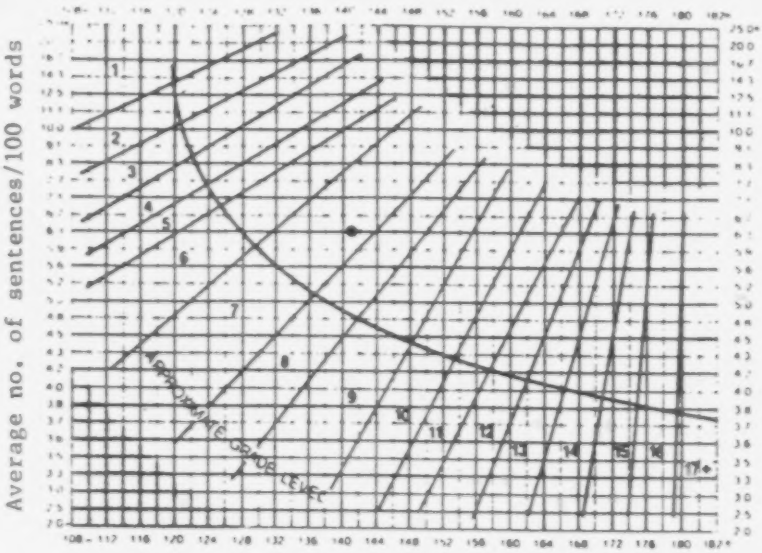
	Sample 1	Sample 2	Sample 3
1. Choose three samples, 100 words each, from various sections of the material.	page _____	page _____	page _____
2. Count the number of sentences in each sample, stopping the count with the sentence ending nearest the 100-word limit.			
A. Number of sentences.	A. _____	_____	_____
3. Divide the number of words in the sample by the number of sentences. This will provide the average sentence length.			
B. Number of words in the sample divided by number of sentences.	B. _____	_____	_____
4. Count the number of words in the samples that have three or more syllables.			
C. Total number of words with three or more syllables.	C. _____	_____	_____
D. Number of words with three or more syllables that should not be counted. These are:	D. _____	_____	_____
(a) Proper names; (b) Combinations of short, easy words (e.g., bookkeeper); (c) Verb forms made into three syllables by adding -ed, -es, (e.g., created, opposes); (d) Technical in nature (if you intend to teach as vocabulary).			
E. Corrected number of words with three or more syllables (C minus D).	E. _____	_____	_____
5. Add the total average sentence length and the corrected number of three-syllable words.			
F. Average sentence length (B) plus corrected number of three syllable words (E).	F. _____	_____	_____
6. Compute reading level for the sample.			
G. Multiply previous level (F) by 0.4.	G. _____	_____	_____
7. Compute the average reading levels of the three samples.			
H. Total of the three readings divided by three.	H. _____	_____	_____

$$\frac{G1 + G2 + G3}{3} = \text{FOG Index (Reading Difficulty Level)}$$

Modified from Phelps, L. A. and Lutz, R. (1977). *Career exploration and preparation for special needs learners*. Boston: Allyn and Bacon.

FRY READABILITY FORMULA

Average number of syllables per 100 words



Expanded Directions for Working Readability Graph

1. Randomly select three (3) sample passages and count out exactly 100 words each, beginning with the beginning of a sentence. Do count proper nouns, initializations, and numerals.
2. Count the number of sentences in the hundred words, estimating length of the fraction of the last sentence to the nearest one-tenth.
3. Count the total number of syllables in the 100-word passage. If you don't have a hand counter available, an easy way is to simply put a mark above every syllable over one in each word, then when you get to the end of the passage, count the number of marks and add 100. Small calculators can also be used as counters by pushing numeral 1, then push the + sign for each word or syllable when counting.
4. Enter graph with *average* sentence length and *average* number of syllables; plot dot where the two lines intersect. Area where dot is plotted will give you the approximate grade level.
5. If a great deal of variability is found in syllable count or sentence count, putting more samples into the average is desirable.
6. A word is defined as a group of symbols with a space on either side; thus, *Joe, IRA, 1945,* and & are each one word.
7. A syllable is defined as a phonetic syllable. Generally, there are as many syllables as vowel sounds. For example, *stopped* is one syllable and *wanted* is two syllables. When counting syllables for numerals and initializations, count one syllable for each symbol. For example, *1945* is four syllables, *IRA* is three syllables, and & is one syllable.

Note: This "extended graph" does not outmode or render the earlier (1968) version inoperative or inaccurate; it is an extension. (REPRODUCTION PERMITTED—NO COPYRIGHT)

FLESCH READABILITY FORMULA

A. Selection of Samples
   1. Take enough written samples from the text to make a fair test. To make your samples random, go by a strictly numerical scheme (e.g., selecting random page numbers from a given book) rather than picking "good" or "typical" samples.
   2. Each sample should start at the beginning of a paragraph. Example: In a 152-page book, take the first paragraphs on each of pages 7, 25, 78, 122. Page numbers are chosen "blind" without looking at these pages.

B. Counting the Number of Words
   1. Start counting the words. Stop when you reach 100. You need 100 words for each sample.
   2. Count contractions and hyphenated words as one word.
   3. Count numbers and letters as words, if separated by spaces. Example: "1948" and "C.O.D." would each count as one word.

C. Counting the Number of Sentences
   1. Count complete sentences or complete units of thought. Some sentences are marked off by colons or semicolons.
   2. Don't break up sentences joined by conjunctions such as "and" or "but."

D. Figuring Average Sentence Length
   1. When using several samples, figure the average sentence length for all the samples combined.
   2. Total the number of words in all of the samples (4 samples would have 400 words) and divide by the number of sentences in all of the samples.

E. Counting the One-Syllable Words
   1. Count all the one-syllable words in all of the 100-word samples and divide the total number of one-syllable words by the number of samples.

F. Figuring the Reading Ease Score
   1. Apply the average sentence length in words and the average number of one-syllable words per sample to the Flesch Reading Ease Index Table to arrive at the reading ease index number and then use the Flesch Conversion Table to compute the estimated reading grade.

FLESCH READING EASE INDEX TABLE

Average Wrds. Per Sentence	Number of One-Syllable Words per Hundred Words																					
	84	82	80	78	76	74	72	70	68	66	64	62	60	58	56	54	52	50	48	46	44	42	40
9	94	90	87	84	81	78	74	72	68	65	61	58	56	52	49	45	42	40	36	33	29	27	23
10	93	89	86	83	80	77	73	71	67	64	60	57	55	51	48	44	41	39	35	32	28	26	22
11	92	88	85	82	79	76	72	70	66	63	59	56	54	50	47	43	40	38	34	31	27	25	21
12	91	87	84	81	78	75	71	69	65	62	58	55	53	49	46	42	39	37	33	30	26	24	20
13	90	86	83	80	77	74	70	68	64	61	57	54	52	48	45	41	38	35	32	29	25	23	19
14	89	85	82	79	76	72	69	67	63	60	56	53	50	47	44	40	37	34	31	28	24	22	18
15	88	84	81	78	75	71	68	66	62	59	55	52	49	46	43	39	36	33	30	27	23	21	17
16	87	83	80	77	74	70	67	65	61	58	54	51	48	45	42	38	35	32	29	26	22	20	16
17	86	82	79	76	73	69	66	64	60	57	53	50	47	44	41	37	34	31	28	25	21	19	15
18	85	81	78	75	72	68	65	63	59	56	52	49	46	43	40	36	33	30	27	24	20	18	14
19	83	80	77	74	71	67	64	61	58	55	51	48	45	42	39	35	32	29	26	23	19	17	13
20	82	79	76	73	70	66	63	60	57	54	50	47	44	41	38	34	31	28	25	22	18	16	12
21	81	78	75	72	69	65	62	59	56	53	49	46	43	40	37	33	30	27	24	21	17	15	11
22	80	77	74	71	68	64	61	58	55	52	48	45	42	39	36	32	29	26	23	20	16	14	10
23	79	76	73	70	67	63	60	57	54	51	47	44	41	38	35	31	28	25	22	19	15	13	9
24	78	75	72	69	66	62	59	56	53	50	46	43	40	37	34	30	27	24	21	18	14	12	8
25	77	74	71	68	65	61	58	55	52	49	45	42	39	36	33	29	26	23	20	17	13	11	7
26	76	73	70	67	64	60	57	54	51	48	44	41	38	35	32	28	25	22	19	16	12	10	6
27	75	72	69	66	63	59	56	53	50	47	43	40	37	34	31	27	24	21	18	15	11	9	5
28	74	71	68	65	62	58	55	52	49	46	42	39	36	33	30	26	23	20	17	13	10	8	4
29	73	70	67	64	61	57	54	51	48	45	41	38	35	32	29	25	22	19	16	12	9	7	3
30	72	69	66	63	60	56	53	50	47	44	40	37	34	31	27	24	21	18	15	11	8	6	2
31	71	68	65	62	59	55	52	49	46	43	39	36	33	30	26	23	20	17	14	10	7	5	1
32	70	67	64	61	58	54	51	48	45	42	38	35	32	29	25	22	19	16	13	9	6	4	
33	69	66	63	60	57	53	50	47	44	41	37	34	31	28	24	21	18	15	12	8	5	2	
34	68	65	61	59	56	52	49	46	43	40	36	33	30	27	23	20	17	14	11	7	4	1	
35	67	64	60	58	55	51	48	45	42	38	35	32	29	26	22	19	16	13	10	6	3		
36	66	63	59	57	54	50	47	44	41	37	34	31	28	25	21	18	15	12	9	5	2		
37	65	62	58	56	53	49	46	43	40	36	33	30	27	24	20	17	14	11	8	4	1		
38	64	61	57	55	52	48	45	42	39	35	32	29	26	23	19	16	13	10	7	3			

FLESCH CONVERSION TABLE

Reading Ease Score	Estimated Reading Grade
90 to 100	5th Grade
80 to 90	6th Grade
70 to 80	7th Grade
60 to 70	8th to 9th Grade
50 to 60	10th to 12th Grade
30 to 50	13th to 16th Grade (College)
0 to 30	College Graduate

Select student instructional materials. (1977). Columbus, OH: National Center for Research in Vocational Education, pp. 10-12.

CLOZE PROCEDURE FOR READING COMPREHENSION

The Cloze Procedure can be used to test for a learner's ability to comprehend what has been read. This technique is well suited to vocational instructional materials because of the technical terms.

Construction

1. Select a representative passage from your class text of approximately 520 words. The passage should *not* have been previously read by the students. Include only the main body of the material (no captions, heading, etc.).
2. Type the entire first sentence as it is in the text.
3. Beginning with the second sentence, delete every *tenth* word. Use a fifteen space line in place of the deleted word. Number each deletion in the center of the fifteen space line.
4. Make *50* deletions.
5. Leave the last sentence exactly as it is in the text.

Administration

1. Prior to giving the test, demonstrate to students how to take the test. Make the following remarks (or paraphrase):

   > On the next page is a sample of a new kind of test. Each of these tests is made by copying a few paragraphs from a book. Every fifth word was left out of the paragraphs, and blank spaces were put where the words were taken out.
   >
   > Your job will be to guess what word was left out of each space and to write that word in that space.

   It will help you in taking the test if you remember these things.

   1. Write only one word in each blank.
   2. Try to fill every blank. Don't be afraid to guess.
   3. You may skip hard blanks and come back to them when you have finished.
   4. Wrong spelling will not count against you if we can tell what word you meant.
   5. Most of the blanks can be answered with ordinary words but a few will be
      - numbers like ..... 3,427 or $12 or 1954
      - contractions like ..... can't or weren't
      - abbreviations like ..... Mrs. U.S.A.
      - parts of hyphenated words like ..... self- in the word self-made
2. Using an over head projector or the chalkboard, present a short passage of three or four sentences with every tenth word deleted as an example of the activity.
3. Have the class fill in the deletions orally. Explain that while more than one word could be used, only the exact replacements will be accepted on this test.
4. Hand out the sheet to the class.
5. Answer any questions.

Although there is no time limit, students will usually complete the test in 50 minutes.

Scoring the Test

A student's responses are scored correct only when they exactly match the words deleted. Minor spelling errors are scored correct so long as the response is otherwise correct. However, omission of plural or tense endings is scored incorrect as in "table" for tables or "work" for worked. Convert raw scores to percentage scores by multiplying the number correct by two, when a 50-item test is used. To save time, use a window key with holes cut in a sheet of paper so that everything but the responses is masked when the sheet is placed over the test. Write the correct response beside each window.

_____ Raw Score × 2 = _____ %

58% and higher - Independent level
44% to 58% - Instructional level
below 44% - Frustrational level

Taken from: Sarkees, M.D. & Scott, J.L. (1985). Vocational special needs (2nd ed.). Alsip, Illinois: American Technical Publishers, Inc.

COMMUNICATION SKILLS (C)

Writing

87

PRESENTATION STEPS	ACTIVITY
7. Discuss instructional methods which can be utilized to assist learners who have poor writing skills.	
a. Present Transparency M-8: T13 "Remedial Writing Techniques"	Discuss Transparency M-8: T13
b. Resource: See pp. 9-10 in Overview.	
** Presentation of Enabling Objective #8 **	
8. Present Transparency M-8: T14 "Communication Skill (D): Speaking And Listening"	Discuss Transparency M-8: T14
a. Review the associated generalizable skill elements for oral communications (speaking and listening).	

REMEDIAL WRITING TECHNIQUES

- Diagnose the student's writing problem
- Motivate the student
- Be a good role model
- Provide samples
- Provide vocationally related writing assignments
- Tailor instruction to the student's specific needs
- Correct the student's errors

COMMUNICATION SKILLS (D)

Oral Communication Skills:

Speaking and Listening

PRESENTATION STEPS	ACTIVITY
8. Discuss instructional methods which can be utilized to assist learners who have poor oral communication.	
a. Discussion Question: Ask participants to give examples of basic oral communication skills needed in their vocational program.	List Responses On Chalkboard
b. Present Transparency M-8: T15 "Remedial, Oral Communication Skills Techniques"	Discuss Transparency M-8: T15
c. Resource: See pp. 11-12 in Overview.	
** Presentation of Enabling Objective #9 **	

REMEDIAL ORAL COMMUNICATION SKILLS TECHNIQUES

- Assess the student's oral communication skills
- Create an appropriate learning environment
- Use appropriate instructional techniques

PRESENTATION STEPS	ACTIVITY
H. Discuss basic Interpersonal Relations Skills.	
1. Discussion Question: Ask participants to define interpersonal relations skills.	List Responses On Chalkboard
2. Discussion Question: Ask participants to give examples of interpersonal relations skills.	
3. Present Transparency M-8: T16 "Interpersonal Relations Skills"	Discuss Transparency M-8: T16
a. Resource: See pp. 13-14 in	
4. Discuss instructional methods which can be utilized to assist learners who have poor interpersonal relations skills.	
a. Discussion question: In what ways can vocational educators assist learners that have poor interpersonal relations skills?	List Examples On Chalkboard
b. Present Transparency M-8: T17 "Instructional Techniques For Teaching Interpersonal Relations Skills"	Discuss Transparency M-8: T17

** Presentation of Enabling Objective #10 **

INTERPERSONAL RELATIONS SKILLS

- Work Behaviors
- Instructional and Supervisory Conversations
- Conversations

INSTRUCTIONAL TECHNIQUES FOR TEACHING INTERPERSONAL RELATIONS SKILLS

- Conduct your vocational laboratory as a business
- Provide helpful personal information resources
- Invite guest speakers to your vocational laboratory from business and industry
- Take students on a field trip to local businesses or industry
- Set a good example

PRESENTATION STEPS	ACTIVITY
I. Discuss basic Reasoning Skills.	
1. Present Transparency M-8: T18 "Reasoning Skills"	
a. Review the associated generalizable skill elements for Reasoning Skills.	
b. Resource: See pp. 16-17 in Overview.	
2. Discuss instructional methods which can be utilized to assist learners who have poor reasoning skills.	
a. Discussion Question: What instructional methods can be utilized to assist learners who have poor reasoning skills?	List Responses On Chalkboard
b. Present Transparency M-8: T19 "Reasoning Skills: Instructional Methods"	
** Presentation of Enabling Objective #11 **	
J. Discuss the importance of Program Evaluation when taking into account the development of generalizable skills instruction.	
1. Present Transparency M-8: T20 "Vocational Program Evaluation"	Discuss Transparency M-8: T20
2. Resource: See pp. 18-19 in the Overview	
** Presentation of Enabling Objective #12 **	

Reasoning Skills

REASONING SKILLS: INSTRUCTIONAL METHODS

Students can learn reasoning skills by working together on teams and developing projects, reports, and exercising their reasoning skills by involvement with appropriate work samples.

VOCATIONAL PROGRAM EVALUATION

- Program Needs Assessment
- Program Planning
- Process Evaluation
- Outcome Evaluation

PRESENTATION STEPS	ACTIVITY
III. SUMMARY	
A. Present Transparency M-8: T21 & T22 "Module 8 Review"	Review Module 8
B. Pass out handout M-8: H08 "Module Eight Review Notes"	

MODULE EIGHT REVIEW

Now that we have completed Module Eight, can you:

- **Identify the consequences of a student who lacks basic education skills?**
- **Identify two National Commission studies which emphasize the importance of students acquiring basic education skills?**
- **Define the term "generalizable skills?"**
- **Discuss the advantages of integrating generalizable skills instruction with vocational education?**
- **Identify four generalizable skill areas?**
- **Discuss instructional strategies for teaching basic mathematics skills?**

MODULE EIGHT REVIEW NOTES

This handout has been prepared in an effort to assist the participant with his or her review of Module 8. Please remember, that these notes will only highlight important concepts.

1. The "back to basics" movement in education has been influenced by legislative mandates, parental insistance of instruction in the basic education skills, and the recommendations of National Commissions pertaining to excellence in education--i.e., The National Commission on Excellence in Education (1983), and The National Commission on Secondary Vocational Education (1984).

2. The lack of basic job-related academic and interpersonal relations skills are primary reasons why learners with special needs will: (a) drop out of school, (b) become underemployed or unemployed, and (c) will be unable to maintain employment.

3. Vocational education provides an excellent environment for students to learn basic education skills for the following reasons:

   A. Vocational education provides "real world" relevant learning experiences.
   B. Vocational education provides individualized instruction wherein student can progress at their own rate and receive immediate feedback.
   C. Vocational education provides the student with an opportunity to improve basic interpersonal relations and basic work skills as a result of the students' involvement in group projects.
   D. Vocational education taps the students' natural interests in the world about them and allows the student an opportunity to use their tactile and kinesthetic senses in learning.
   E. Through application of the basic skills, students can develop competence and confidence.

4. Greenan has defined "generalizable skills" as skills which are basic, necessary and transferable (or common) within and/or across vocational programs. Basic education skills are commonly believed to be necessary for success in vocational programs and employment.

5. Greenan has identifed four generalizable skill areas which are basic and necessary for a student's success in vocational education programs and gainful employment: (a) mathematics skills, (b) communication skills (c) interpersonal relations skills, and (d) reasoning skills.

6. Basic mathematics skills:

   A. If a student lacks the basic math skills required for entry into their chosen occupation, it becomes the responsibility of mathematics and vocational educators to work together and provide structured supplemental instruction for the student.

   B. It is important for the vocational educator to determine the kinds of math used by workers in occupational fields. In this way, the student will be learning the appropriate mathematical skills he or she will need for their chosen vocation.

   C. The following are basic math skills which can be generalized to many occupational areas: (a) whole numbers. (b) fractions, (c) decimals, (d) percent, (e) mixed operations, (f) measurement and calculation, (g) estimation.

7. Communication skills:

   A. Communication skills consist of the following basic components: (a) words and meanings, (b) reading, (c) writing, (d) speaking, (e) listening.

   B. The following are some of the remedial reading techniques which can be used by vocational educators: (a) determine the readability level of material used in the classroom by utilizing the FOG Reading Index or Flesch Readability Formula, (b) determine the student's reading level by using the Cloze Procedure, (c) match the student's reading level with appropriate level reading material, (d) rewrite important material at the student's level. Do not, however, delete necessary technical terms, (e) tape important information from the text, (f) underline or highlight important information, (g) once students read and comprehend content, utilize related activities and hands-on experiences to help complete the learning process.

   C. The following are techniques which an educator can utilize to help a student improve their basic writing skills: (a) diagnose the student's writing problem, (b) help the student understand the occupational importance of writing, (c) be a good role model, (d) provide samples of good writing, (e) provide vocationally related writing assignments, (f) tailor instruction to the students' specific needs, and (g) correct the students' errors.

   D. The following are techniques which an educator can utilize to help a student improve their oral skills (speaking and listening): (a) assess the student oral communication skills, (b) create an appropriate learning environment, (c) increase the students' awareness of the role of oral communication in their vocational careers and personal lives, (d) provide opportunities for the students to practice and improve their oral skills.

8. Interpersonal relations skills:

   A. Interpersonal relations skills is the ability of an individual to work harmoniously with others (even when under stress), being dependable, and being able to handle stress in a productive way.

   B. Ways in which an educator can facilitate interpersonal relations skills are: (a) conduct the vocational laboratory as a business, (b) provide information for the students which include helpful resources for their personal lives, (c) invite guest speakers to the lab to speak on important interpersonal relations topics, (d) take the students to local businesses or industry so the students can observe employees and/or interview employees, (e) set a good example for the students.

9. Reasoning skills:

   A. Reasoning skills include: (a) verbal reasoning, (b) problem solving, and (c) planning.

   B. Students can learn reasoning skills by working together on teams and developing projects, reports, and exercising their problem solving skills. In addition, students can develop reasoning skills by their involvement with appropriate work samples.

10. Four steps recommended by Albright in adapting a vocational program to take into account the instruction of generalizable skills are: (a) assessing the needs of the program, (b) program planning, (c) evaluating the process of the program, (d) evaluating the results or outcome of the program